UTAH DEPARTMENT OF HEALTH

Salmonellosis (Non-Typhoid)

Disease Plan

Quick Links

Last updated: 07/19/2021, by Delaney Moore.

Questions about this disease plan?

Contact the Utah Department of Health Bureau of Epidemiology: 801-538-6191.

✓ CRITICAL CLINICIAN INFORMATION

Clinical Evidence

Signs/Symptoms
• Most common symptoms include diarrhea (sometimes bloody), stomach cramps, fever, nausea, and vomiting.
• Complications may include:
   o Enteric fever
   o Bacteremia and vascular infection
   o Localized infections which may present as septicemia, abscess, arthritis, or cholecystitis.

Period of Communicability • Salmonellosis is communicable as long as the infected person excretes *Salmonella* bacteria in his/her stool. This can last from days to months, but rarely lasts more than one year.
Incubation Period • Range 6-72 hours (average of 12-36 hours). Incubation periods longer than three days have been documented.
Mode of Transmission • Transmitted via the fecal-oral route
Laboratory Testing
Type of Laboratory Test & Timing of Specimen Collection • Culture is the preferred method for *Salmonella* diagnosis.   o Specimens for culture should be collected as soon as possible, ideally within the first few days of illness, and should be processed as soon as possible to ensure bacterial isolation. • PCR and other rapid tests are available and specimens should be collected as soon as possible. • Serologic evaluation for *Salmonella* agglutinins is not recommended.
Type of Specimens • Stool, blood, and urine are all acceptable specimens.
Treatment Recommendations
Type of Treatment • Supportive care • Antibiotics are not generally recommended for patients with uncomplicated non-typhoidal salmonellosis because treatment does not shorten the duration of disease and may prolong the carrier state.
Prophylaxis • None
Contact Management
Isolation of Case • Food handlers with salmonellosis must be excluded from work until two negative stool samples have been collected.   o A food handler is any person directly preparing or handling food, including those involved in patient care or childcare.
Quarantine of Contacts • Contacts with diarrhea who are food handlers should be considered the same as a case and shall be handled in the same fashion. Otherwise, no restriction.
Infection Control Procedures
• Enteric precautions

✓ WHY IS SALMONELLOSIS IMPORTANT TO PUBLIC HEALTH?

Salmonella bacteria were discovered more than a century ago. Salmonellosis, the illness caused by *Salmonella* when ingested, primarily results in a mild to severe diarrheal illness, known as acute gastroenteritis. An estimated 1.2 million cases of salmonellosis occur annually in the U.S. About 450 people die each year from salmonellosis, with infants, the elderly and the immune compromised being at greatest risk. Salmonellosis is a leading cause of foodborne disease with multiple outbreaks detected each year.

✓ DISEASE AND EPIDEMIOLOGY

Clinical Description

Gastroenteritis: Infection with non-typhoidal *Salmonella* usually results in gastroenteritis. The most common symptoms include diarrhea (sometimes bloody), stomach cramps, fever, nausea, and vomiting. Diarrhea is usually self-limiting, lasting about 3-7 days. Occasionally patients may require hospitalization due to severe dehydration, which is more common among infants, the elderly, and the immunocompromised.
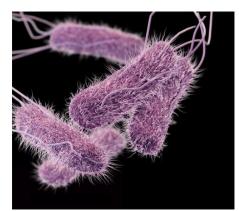
Enteric Fever: Enteric fever is the result of invasive disease and is characterized by fever and abdominal symptoms. Systemic illness more commonly results from infection with *S.* Typhi, resulting in typhoid fever. However, infection with *S.* Paratyphi may produce a similar, but less severe, syndrome.

Bacteremia and Vascular Infection: Any *Salmonella* serotype can cause bacteremia. However, the syndrome is most common with *S.* Cholerasuis and *S.* Dublin infections.

Localized Infections: Approximately 5-10% of persons with *Salmonella* bacteremia develop localized infections that may present as septicemia, abscess, arthritis, or cholecystitis.

Causative Agent

Salmonellosis refers to disease caused by any serotype of bacteria in the genus *Salmonella*, other than *Salmonella* Typhi (the *Salmonella* species that causes typhoid fever). The genus *Salmonella* consists of two species, *Salmonella enterica* and *Salmonella bongori*; the former is further divided into six different subspecies. Based upon high levels of DNA similarity, most clinically important salmonellae are formally classified within a single subspecies, *Salmonella enterica.* All human pathogens are regarded as serovars within the

Three-dimensional computer-generated image of *Salmonella* serotype Typhi bacteria (CDC Photo, 2014)

subspecies of *S. enterica*. For example, the proposed nomenclature would change *S. typhi* to *S. enterica* serovar Typhi, abbreviated *S.* Typhi, and *Salmonella enterica* serovar Enteritidis would be referred to as *S.* Enteritidis instead of *S. enteritidis*.

Differential Diagnosis

Shigella, *E. coli* O157:H7, *Campylobacter*, *Yersinia enterocolitica*, and bacterial food poisoning may show similar signs and symptoms.

Laboratory Identification

Culture of stool, blood, or urine is the preferred method for *Salmonella* diagnosis. However, there has been an increasing shift to using culture-independent diagnostic tests (CIDTs) over the last several years. The most commonly used CIDT for *Salmonella* in Utah is polymerase chain reaction (PCR) and most laboratories utilizing PCR use either the BioFire FilmArray® or the VERIGENE® multiplex panels. Serologic evaluation for *Salmonella* agglutinins is not recommended.

Specimens should be collected as soon as possible, ideally within the first few days of illness, and should be processed as soon as possible to ensure bacterial isolation.
> **UPHL:** The Utah Public Health Laboratory (UPHL) accepts stool specimens for isolation, serotyping, and Whole Genome Sequencing (WGS). All isolates from other laboratories should be submitted to UPHL.

Treatment

For the majority of cases, treatment consists of supportive care and rehydration. Antibiotics are not generally recommended for patients with uncomplicated non-typhoidal salmonellosis because antibiotic therapy does not shorten the duration of disease and may prolong the carrier states. However, antibiotic treatment is recommended for:
- People with severe illness;
- People with continued fever or manifestations of extra-intestinal infection;
- People with a weakened immune system, such as from HIV infection or chemotherapy treatment;
- Adults older than 50 who have medical problems, such as heart disease;
- Infants (children younger than 12 months);
- Adults 65 years of age or older.

Resistance to essential antibiotics is increasing in *Salmonella*, particularly in *S.* Typhimurium and *S.* Newport. Awareness of resistance patterns in certain strains can help when choosing an appropriate therapeutic agent.

Case Fatality

The case fatality rate for non-typhoidal *Salmonella* infections is less than 1%. Elderly persons 65 years of age and older have the highest case fatality rate.

Reservoir

Salmonella bacteria are widely distributed in animals, including livestock, pets, poultry, other birds, reptiles, and amphibians. Most infected animals are chronic carriers. Humans can also be a source of infection.

Transmission

Salmonellosis is transmitted via the fecal-oral route. The most common mode of transmission is ingestion of food or water that has been contaminated with human or animal feces. This includes raw or undercooked poultry, eggs, and egg products; undercooked meats; and raw milk or raw milk products. However, any food contaminated with the bacteria can be a source of infection. In most circumstances, contaminated food must be subject to time and temperature conditions that allow reproduction of the bacteria to numbers that can cause disease in those ingesting the contaminated food. In addition, reptiles such as iguanas and lizards are chronic carriers of these bacteria and can be sources of infection. Person-to-person spread can also occur, especially among household contacts, preschool children in childcare, and the elderly and developmentally disabled living in residential facilities. Transmission can also occur from person-to-person through certain types of sexual contact (e.g., oral-anal contact).

Susceptibility

All people are susceptible to *Salmonella*. However, certain groups are more likely to become infected:
- Children younger than five years of age;
- Infants (children younger than 12 months) who are not breast fed;
- People taking certain medications (antacids, broad-spectrum antibiotic treatment, etc.);
- People with a weakened immune system;
- Adults 65 years of age and older.

Incubation Period

The incubation period for salmonellosis is 12-36 hours, with a range of 6-72 hours. However, incubation periods longer than three days have been documented.

Period of Communicability

The disease is communicable for as long as the infected person excretes *Salmonella* bacteria in his/her stool. This can last from days to months, depending on the serovar, but rarely lasts more than one year. Treatment with antibiotics can prolong carriage by suppressing competing bacteria in the gastrointestinal tract.

Epidemiology

Salmonellosis has a worldwide distribution, with approximately 1.4 million cases occurring annually in the U.S. The majority of cases are sporadic, but large outbreaks have occurred in institutional settings and from common food sources. The largest common-vehicle outbreak of salmonellosis ever recognized in the U.S. was caused by ice cream made by a national producer from premix that had been transported in contaminated tanker trucks. Over the past

five years, Utah has averaged roughly 350 cases of salmonellosis per year. The most common serovars seen in Utah are *S.* Typhimurium, *S.* Enteritidis, and *S.* Newport.

✓ PUBLIC HEALTH CONTROL MEASURES

Public Health Responsibility
- Investigate all suspect cases of disease and fill out and submit appropriate disease investigation forms.
- Provide education to the general public, clinicians, and first responders regarding disease transmission and prevention.
- Identify clusters or outbreaks of this disease and determine the source.
- Identify cases and sources to prevent further transmission.

Prevention
Environmental Measures
Implicated food items must be removed from consumption. A decision about testing implicated food items can be made in consultation with the enteric epidemiologist at the Utah Department of Health (UDOH) and UPHL.

The general policy of UPHL is to test only food samples implicated in suspected outbreaks, not in single cases (except when botulism is suspected). If holders of food implicated in single case incidents would like their food tested, they may be referred to a private laboratory that will test food or store the food in their freezer for a period of time in case additional reports are received. However, in certain circumstances, a single, confirmed case with leftover food that had been consumed within the incubation period may be considered for testing.

Personal Preventive Measures/Education
To avoid exposure to *Salmonella*, persons should:
- Always wash their hands thoroughly with soap and water before eating or preparing food, after using the toilet, after changing diapers, and after touching pets or other animals (especially reptiles).
- Wash the child's hands as well as their own hands after changing diapers, and dispose of diapers in a closed-lid garbage can.
- Wash hands thoroughly and frequently when ill with diarrhea or when caring for someone with diarrhea. Scrub hands for at least 15-20 seconds after cleaning the bathroom; after using the toilet or helping someone use the toilet; after changing diapers; before handling food; and before eating.
- Keep food that will be eaten raw, such as vegetables, from becoming contaminated by animal-derived food products.
- Avoid letting infants or young children touch reptiles, such as turtles or iguanas, or their cages.
- If elderly or immunocompromised, avoid reptiles when choosing pets.
- In a childcare or school, do not use reptiles as classroom pets.

- Make sure to thoroughly cook all food products from animals, especially poultry and eggs, and avoid consuming raw or cracked eggs, unpasteurized milk, or other unpasteurized dairy products.
- Avoid fecal contact that may result from oral-anal sexual contact. Latex barrier protection (i.e., dental dam) may prevent the spread of *Salmonella* to a case's sexual partners and may prevent exposure to, and transmission of, other fecal-oral pathogens.

Chemoprophylaxis
None.

Vaccine
None.

Isolation and Quarantine Requirements

Isolation: Utah Food Code requires that food handlers are restricted from work until one of the following three criteria are met:

1. Two (2) consecutive negative stool specimen cultures are taken:
    a. Not earlier than 48 hours after discontinuance of antibiotics, and
    b. At least 24 hours apart;
2. More than 30 days have passed since resolution of vomiting or diarrhea resolved; or
3. More than 30 days have passed since diagnosis if the employee was asymptomatic.

    NOTE: A food handler is any person directly preparing or handling food. This can include a patient or childcare provider.

Hospital: Enteric precautions

Quarantine: Contacts with diarrhea who are food handlers should be considered the same as a case and shall be handled in the same fashion. Otherwise, no restrictions.

NOTE: The local health department will decide which cases and/or contacts to obtain negative stool samples, if necessary, for ill food handlers.

✓ CASE INVESTIGATION

Reporting
Report any illness to public health authorities that meets any of the following criteria:

1. Any person with *Salmonella* spp. isolated from a clinical specimen.
2. Any person with *Salmonella* spp. detected in a clinical specimen using culture-independent diagnostic tests (CIDT).

3. Any person with diarrhea and who is a contact of a salmonellosis case or a member of a risk group defined by public health authorities during an outbreak investigation.
4. A person whose healthcare record contains a diagnosis of salmonellosis.
5. A person whose death certificate lists salmonellosis as a contributing or underlying cause of death.

Other recommended reporting procedures
- Report all cases of salmonellosis according to state regulations.
- Reporting should be ongoing and routine.
- Frequency of reporting should follow the Utah Department of Health's routine schedule.

Table 1: Criteria to determine whether a case should be reported

Criterion	Reporting	
Clinical Evidence		
Clinically compatible illness		N
Healthcare record contains a diagnosis of salmonellosis	S	
Death certificate contains salmonellosis as a contributing or underlying cause of death	S	
Laboratory Evidence		
Isolation of *Salmonella* spp. from a clinical specimen	S	
Detection of *Salmonella* spp. in a clinical specimen using a CIDT	S	
Epidemiologic Evidence		
Epidemiologically linked to a salmonellosis case		O
Member of a risk group as defined by public health authorities during an outbreak investigation		O

Notes:
S = This criterion alone is Sufficient to report a case
N = All "N" criteria in the same column are Necessary to report a case.
O = At least one of these "O" (One or more) criteria in each category (e.g., clinical evidence and laboratory evidence) in the same column—in conjunction with all "N" criteria in the same column—is required to report a case.
* A requisition or order for any of the "S" laboratory tests is sufficient to meet the reporting criteria.

CSTE Case Definition
Salmonellosis (non-typhoidal) 2016

Clinical Criteria
An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections may occur and the organism may cause extra-intestinal infections.

Laboratory Criteria
Supportive laboratory evidence: Detection of *Salmonella* spp. in a clinical specimen using a CIDT.

Confirmatory laboratory evidence: Isolation of *Salmonella* spp. from a clinical specimen.

Epidemiologic Linkage
Probable: A clinically compatible case that is epidemiologically linked to a case that meets the supportive or confirmatory laboratory criteria for diagnosis.

Case Classification

> **Confirmed:** a case that meets the confirmed laboratory criteria or diagnosis.

> **Probable:** a case that meets the supportive laboratory criteria for diagnosis, OR a clinically compatible case that is epidemiologically linked to a case that meets the supportive or confirmatory laboratory criteria for diagnosis.

Criteria to distinguish a new case of this disease or condition from reports or notifications which should not be counted as a new case for surveillance:
- A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual.
- When two or more different serotypes are identified from one or more specimens from the same individual, each should be reported as a separate case.

Table 2: Criteria for defining a case of salmonellosis

Criterion	Probable		Confirmed
Clinical Evidence			
Clinically compatible illness	N		
Laboratory Evidence			
Detection of *Salmonella* spp. in a clinical specimen using a CIDT		N	
Isolation of *Salmonella* spp. from a clinical specimen			N
Epidemiologic Evidence			
Epidemiologically linked to a confirmed or probable case of salmonellosis with laboratory evidence	O		
Member of a risk group as defined by the public health authorities during an outbreak investigation	O		
Criteria to distinguish a new case			
Not counted as a new case if occurred within 365 days of a previously reported salmonellosis infection in same individual (unless separate serotype as described below)		N	N
Report separate serotypes as distinct cases.			N

Notes:
N = All "N" criteria in the same column are Necessary to classify a case.

O = At least one of these "O" (One or more) criteria in each category (e.g., clinical evidence and laboratory evidence) in the same column—in conjunction with all "N" criteria in the same column—is required to report a case.

Case Investigation Process

- Interview the patient to determine:
    - Whether the patient works in a high-risk setting (e.g., food service, childcare, healthcare), and
    - Likely source of infection.
- Provide education to the patient about disease transmission and prevention.
- Exclude food handlers from work until diarrhea has resolved. Negative stool specimens may also be required.
- Assure isolate submission to UPHL.

Outbreaks

CDC defines a foodborne outbreak as "an incident in which two or more persons experience a similar illness resulting from the ingestion of a common food." To confirm an outbreak of salmonellosis, the same *Salmonella* species must be isolated from clinical specimens from at least two ill persons or the species must be isolated from an epidemiologically implicated food. The source of the infection should be identified and measures to identify additional ill persons and/or to remove the source from consumers should be taken. Control of person-to-person transmission requires special emphasis on personal cleanliness and sanitary disposal of feces.

Identifying Case Contacts and Case Contact Management

Childcare

Since salmonellosis may be transmitted from person-to-person through fecal-oral transmission, it is important to follow-up on cases in childcare settings. General recommendations include:

- Exclude children with *Salmonella* infection who have diarrhea until their diarrhea has resolved.
- Children with *Salmonella* infection who have no diarrhea and are not otherwise ill may be excluded or may remain in the program if special precautions are taken.
- Most staff in childcare programs are considered food handlers. Those with *Salmonella* in their stool (symptomatic or not) can remain on site but must not prepare food or feed children until their diarrhea has resolved. Negative stool specimens may be required.

School

Since salmonellosis may be transmitted from person-to-person through fecal-oral transmission, it is important to follow-up on cases in school settings. The following general guidelines are recommended:

- Exclude students or staff with *Salmonella* infection who have diarrhea until their diarrhea has resolved.
- Students or staff with *Salmonella* infection who do not handle food, have no diarrhea or have mild diarrhea, and are not otherwise sick may remain in school if special precautions are taken.

- Students or staff who handle food and have *Salmonella* infection (symptomatic or not) must not prepare food until their diarrhea has resolved. Negative specimens may be required.

Community Residential Programs

Actions taken in response to a case of salmonellosis in a community residential program will depend on the type of program and the level of functioning of the residents.

In long-term care facilities, place residents with salmonellosis on standard (including enteric) precautions until their symptoms subside. Staff members who give direct patient care (e.g., feed patients, give mouth or denture care, or give medications) are considered food handlers and should be treated as such. In addition, staff members with *Salmonella* infection who are not food handlers should not work until their diarrhea is resolved. Negative stool samples may be required.

In residential facilities for the developmentally disabled, staff and clients with salmonellosis must refrain from handling or preparing food for other residents until their diarrhea has subsided. Negative stool specimens may be required. In addition, staff members with *Salmonella* infection who are not food handlers should not work until their diarrhea is resolved.

✓ REFERENCES

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Control of Communicable Diseases Manual (20th Edition), David L. Heymann MD, Ed., 2015.

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R392-100 Food Service Sanitation Rule, Effective Date: May 15, 2016.

✓ VERSION CONTROL

Updated January 2017: Added Why is Salmonellosis Important to Public Health, Identify Case Contacts, Contact Management, Acknowledgements, and Version Control. Updated Differential Diagnosis, Environmental Measures, Laboratory Identification, Treatment, Transmission, Susceptibility, Period of Communicability, Epidemiology, Personal Preventative Measures/Education, Reporting, and Case Definitions.

Updated December 2020: Added Critical Clinician Information and Electronic Laboratory Reporting Processing Rules sections. Updated Importance to Public Health, Disease and Epidemiology, Public Health Control Measures, Case Investigation, and UT-NEDSS/EpiTrax Minimum/Required Fields by Tab. General updates to document formatting.

Updated July 2021: Updated UT-NEDSS/EpiTrax Minimum/Required Fields by Tab. General updates to wording and document formatting.

✓ UT-NEDSS/EpiTrax Minimum/Required Fields by Tab

Demographic
- First Name
- Last Name
- Street Number
- Street Name
- City
- State
- County
- Zip Code
- Date of Birth
- Area Code
- Phone Number
- Birth Gender
- Ethnicity
- Race

Clinical
- Disease
- Onset Date
- Visit Type
  - (if inpatient) Did Salmonellosis cause hospitalization?
- Died
  - (if yes) Date of Death
  - (if yes) Did Salmonellosis cause death?
- Symptoms

Laboratory
- Lab Name
- Lab Test Date
- Collection Date
- Specimen Source
- Test Type
- Organism
- Test Result
- Accession Number

Epidemiological
- Food Handler
  - Name of facility where patient handled food
  - Location
  - Did the patient work while ill?
  - Important information including dates

- Healthcare Worker
  - Name of healthcare facility
  - Location
  - Did the patient work while ill?
  - Important information, including dates
- Group Living
  - Name of the facility
  - Location
  - Did the patient work/attend while ill?
  - Important information, including dates
- Childcare Association
  - Name of the childcare
  - Location
  - Did the patient work/attend while ill?
  - Important information, including dates
- Attends School?
  - Did the patient attend while ill?
  - Important information, including dates
  - Occupation
- Did the patient eat at any restaurants (fast food/chain/sit-down/cart/kiosk/etc.) in the 7 days before illness?
- Did the patient eat food from any grocery stores in the 7 days before illness (including farmers' markets, produce or fruit stands, etc.)?
- Did the patient attend/visit any events during the 7 days before illness?
- Imported From
- Risk Factors
- Risk Factor Notes

Investigation
- Date 7 days before disease onset
- Date 1 day before disease onset
- Did the patient travel outside the U.S. during the exposure period?
  - (if yes) Describe travel (location, dates, mode, if others were ill, etc.)
- Did the patient travel outside Utah, but inside the U.S. during the exposure period?

Investigation continued

- o (if yes) Describe travel (location, dates, mode, if others were ill, etc.)
- Milk
  - o (if yes) Details and source
- Blue cheeses
- Queso fresco/queso blanco
- Other cheese
  - o (if yes) Details
- Shell eggs
- Anything uncooked and made with raw eggs
- Chicken
  - o (if yes) Whole or parts?
- Hamburger/other ground beef
- Pork
- Deli meat/cold cuts
- Fish (not canned tuna/salmon)
- Did the patient handle any other raw meat at home/anywhere else?
- Tomatoes
- Bell peppers
- Watermelon
- Mango
- Apple juice/cider
  - o (if yes) Unpasteurized?
- Peanuts
- Peanut butter
- Did the patient have contact with animal waste/manure during the exposure period?
- Did the patient have contact with ANY animals (including farm animals, pets) during the exposure period?
  - o (if yes) What animals did the patient have contact with?
- Did the patient drink or have exposure to any of the following animals during the exposure period?
- Person interviewed
  - o (If Unable to Interview) Specify reason for unable to interview (i.e., LTF, refused, etc.)

Contacts

- Does case's infection appear secondary to another person's infection? (if YES, please fill out information in the contact table)
- Any contacts ill with similar symptoms? (if YES, please fill out information in the contact table)

Reporting

- Date first reported to public health

Administrative

- State Case Status
- Outbreak Associated
- Outbreak Name
- Probable Case?
  - o (if yes) Epi linked or laboratory diagnosed?

✓ ELECTRONIC LABORATORY REPORTING PROCESSING RULES

Salmonellosis (Non-Typhoid) Rules for Entering Laboratory Test Results

The following rules describe how laboratory results reported to public health should be added to new or existing events in UT-NEDSS/EpiTrax. These rules have been developed for the automated processing of electronic laboratory reports, although they apply to manual data entry, as well.

Test-Specific Rules

Test specific rules describe what test type and test result combinations are allowed to create new morbidity events in UT-NEDSS/EpiTrax, and what test type and test result combinations are allowed to update existing events (morbidity or contact) in UT-NEDSS/EpiTrax.

Test Type	Test Result	Create a New Event	Update an Existing Event
Culture	Positive	Yes	Yes
	Negative	No	Yes
	Equivocal	No	Yes
	Other	No	Yes
PCR/amplification	Positive	Yes	Yes
	Negative	No	Yes
	Equivocal	No	Yes
	Other	No	Yes
Total Antibody (by EIA, IFA, TRF, etc.)	Positive	Yes	Yes
	Negative	No	Yes
	Equivocal	No	Yes
	Other	No	Yes

Whitelist Rules

Whitelist rules describe how long an existing event can have new laboratory data appended to it. If a laboratory result falls outside the whitelist rules for an existing event, it should not be added to that event, and should be evaluated to determine if a new event (CMR) should be created.

Salmonellosis (Non-Typhoid) Morbidity Whitelist Rule: If the specimen collection date of the laboratory result is one year or less after the specimen collection date of the morbidity event, the laboratory result should be added to the morbidity event.

Salmonellosis (Non-Typhoid) Contact Whitelist Rule: If the specimen collection date of the laboratory result is 30 days or less after the event date of the contact event, the laboratory result should be added to the contact event.

Graylist Rule

We often receive laboratory results through ELR that cannot create cases, but can be useful if a case is created in the future. These laboratory results go to the graylist. The graylist rule describes how long an existing event can have an old laboratory result appended to it.

Salmonellosis (Non-Typhoid) Graylist Rule: If the specimen collection date of the laboratory result is 30 days before to seven days after the event date of the morbidity event, the laboratory result should be added to the morbidity event.

Other Electronic Laboratory Processing Rules

- If an existing event has a state case status of "not a case," ELR will never add additional test results to that case. New labs will be evaluated to determine if a new CMR should be created.